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EXAMINER	
SHAH, ANTIM G	

ART UNIT	PAPER NUMBER
2614	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

Docketing@eschweilerlaw.com

Office Action Summary	Application No.	Applicant(s)	
	10/797,937	RUBINSTAIN ET AL.	
	Examiner	Art Unit	
	ANTIM SHAH	2614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 March 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Applicants' amendment filed on 3/10/2009 has been entered. Claims 1, 17 and 19 have been amended. No claims have been canceled. No new claims have been added. Claims 1-19 are still pending in this application, with claims 1, 17 and 19 being independent.

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

3. A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory

double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

4. Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. **Claims 17, 18 and 19** are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over **claims 1, 2 and 9** of parent U.S. Patent No. 6,088,368 and in further view of U.S. Patent No. 6,055,268 to Timm et al ("*Timm*").. Although the conflicting claims are not identical, they are not patentably distinct from each other.

Claims 17, 18 and 19 of the instant application are obvious and unpatentable over claims 1, 2 and 9 of Patent No. 6,088,368. The difference is the narrower claim limitation of N paths and details of the modem. Patented (6088368) claim does not have following limitations: wherein said first modem means and said second modem means further comprises: (a) a first port connected to a physical layer module configured to receive and transmit a single Ethernet signal having a high data rate; (b) a data splitter configured to split the received Ethernet signal into a configurable number of downstream Digital Subscriber Line (DSL) signals; (c) a second port comprising a configurable number of Digital Subscriber Line (DSL) ports coupled to said data splitter, wherein each Digital Subscriber Line (DSL) port is configured to transmit a

separate downstream Digital Subscriber Line (DSL) signal having a configurable downstream data rate, wherein each transmitted downstream Digital Subscriber Line (DSL) signal is transmitted via a corresponding telephone line connected to said Digital Subscriber Line (DSL) port, wherein each Digital Subscriber Line (DSL) port is further configured to receive a upstream Digital Subscriber Line (DSL) signal having a configurable upstream data rate, wherein each received upstream Digital Subscriber Line (DSL) signal is received over said telephone line connected to said Digital Subscriber Line (DSL) port; and (d) a data collection and reorganization unit coupled to said Digital Subscriber Line (DSL) ports and configured to assemble said upstream Digital Subscriber Line (DSL) signals into said single Ethernet signal for transmission by said physical layer module.

Timm discloses wherein said first modem means and said second modem means further comprises: (a) a first port connected to a physical layer module configured to receive and transmit a single Ethernet signal having a high data rate [column 15 line 66-column 16 line 8]; (b) a data splitter configured to split the received Ethernet signal into a configurable number of downstream Digital Subscriber Line (DSL) signals [column 16 lines 9-11, Fig. 3b, column 17 lines 36-67]; (c) a second port comprising a configurable number of Digital Subscriber Line (DSL) ports coupled to said data splitter [column 16 lines 9-11, Fig. 3b, column 17 lines 36-67], wherein each Digital Subscriber Line (DSL) port is configured to transmit a separate downstream Digital Subscriber Line (DSL)

signal having a configurable downstream data rate [column 16 lines 9-11, Fig. 3b, column 17 lines 36-67, column 32 lines 5-18], wherein each transmitted downstream Digital Subscriber Line (DSL) signal is transmitted via a corresponding telephone line connected to said Digital Subscriber Line (DSL) port, wherein each Digital Subscriber Line (DSL) port is further configured to receive a upstream Digital Subscriber Line (DSL) signal having a configurable upstream data rate, wherein each received upstream Digital Subscriber Line (DSL) signal is received over said telephone line connected to said Digital Subscriber Line (DSL) port [column 16 lines 9-11, Fig. 3b, column 17 lines 36-67, column 32 lines 5-18]; and (d) a data collection and reorganization unit coupled to said Digital Subscriber Line (DSL) ports and configured to assemble said upstream Digital Subscriber Line (DSL) signals into said single Ethernet signal for transmission by said physical layer module [column 16 lines 9-11, Fig. 3b, column 17 lines 36-67].

At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify patented claims 1 and 9 of Patent No. 6,088,368 to have above limitations as taught by *Timm*. The suggestion/motivation would have been to provide a new high speed mode for use on standard telephone twisted-pair lines [Timm column 5 lines 26-28].

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

7. **Claims 1 - 5, 8- 9 and 11-19** are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,055,268 to Timm et al ("*Timm*").

As to **claim 1**, *Timm* discloses a modem for bi-directional transporting of an Ethernet signal over a configurable number of telephone lines, comprising:

(a) a first port connected to a physical layer module configured to receive and transmit a single Ethernet signal [column 15 line 66-column 16 line 8];

(b) a data splitter configured to split the received Ethernet signal into the configurable number of downstream data signals [column 16 lines 9-11, Fig. 3b, column 17 lines 36-67, fig. 6f];

(c) a second port comprising the configurable number of Digital Subscriber Line (DSL) ports coupled to said data splitter [column 16 lines 9-11, Fig. 3b, column 17 lines 36-67],

-wherein each Digital Subscriber Line (DSL) port is configured to transmit a separate downstream a separate downstream Digital Subscriber Line (DSL) signal having a configurable downstream data rate [column 16 lines 9-11, Fig. 3b, column 17 lines 36-67, column 32 lines 5-18, fig.6f],

-wherein each Digital Subscriber Line (DSL) port is further configured to receive a separate upstream Digital Subscriber Line (DSL) signal having a configurable upstream data rate [column 16 lines 9-11, Fig. 3b, column 17 lines 36-67, column 32 lines 5-18, fig. 6f],

(d) a data collection and reorganization unit coupled to said Digital Subscriber Line (DSL) ports and configured to assemble said upstream Digital Subscriber Line (DSL) signals into the single Ethernet signal for transmission by said physical layer module [column 16 lines 9-11, Fig. 3b, column 17 lines 36-67]. Timm discloses the modem communication system with receiving and transmitting paths with a switch which multiplex either the training sequence or output data into the transmission path (Timm abstract). Timm also discloses management process for a Mid-band DSL (MDSL) lines which provides a simple, efficient and flexible interface to manage the line connection between MDSL-C (central office site) and MDSL-R (residential site) [column 7 lines 16-30, column 10 lines 1-13, column 15 lines 66 to column 16 lines 26]. DSL modems that

manage connection with a group of machines are termed as DSL router. But they still have function of performing framing data, segmenting data and reassembling data. This is same as MDSL modem that sends and receives the data from MDSL ports and Ethernet ports. It is inherent to sequence, split and re-assemble the data frames.

As to **claim 2**, *Timm* discloses the modem according to claim 1, wherein the data splitter comprises:

a splitting unit which splits the Ethernet data frames of the single Ethernet signal into split frames depending on the number of installed active Digital Subscriber Line (DSL)-ports and the downstream data rates of said active Digital Subscriber Line (DSL)-ports [column 16 lines 9-11, Fig. 3b, column 17 lines 36-67]; and a tagging unit for tagging the split frames with sequence numbers and with the port numbers of the respective Digital Subscriber Line (DSL)-ports to which the split frames are transmitted by the tagging unit [Abstract, column 9 lines 1-64].

As to **claim 3**, *Timm* discloses the modem according to claim 1, wherein the data collection and reorganization unit comprises:

a sequence number detection unit for detecting the sequence numbers of split frames received by the data collection and reorganization unit from the Digital Subscriber Line (DSL)-ports ports [column 16 lines 9-11, Fig. 3b, column 17 lines 36-67]; and

a frame assembly unit which assembles the split frames to Ethernet data frames of a single Ethernet signal depending on the detected sequence number and the port numbers of the respective Digital Subscriber Line (DSL)-ports from which the data collection reorganization unit receives the split frames ports [column 16 lines 9-11, Fig. 3b, column 17 lines 36-67, Abstract, column 9 lines 1-64]. This is well known in the art to sequence and split the frames and also assemble back the split frames to Ethernet data frames. As per *Timm*, figure 3b shows the MDSL router that sends and receives the data from MDSL ports and Ethernet port. It is inherent to sequence, spit and re-assemble the frames.

As to **claim 4**, *Timm* discloses the modem according to claims 1, comprising a flow and rate control memory for storing the Ethernet data stream of the Ethernet signal assembled by said data collection and reorganization unit, wherein the flow and rate control memory is provided to compensate differences in transmitting rates between said first port and said second port [Abstract, column 9 lines 1-64, column 34 line 66-column 35 line 5].

As to **claim 5**, the modem according to claim 1, comprising a configuration and auto sense unit for sensing the port numbers of all active Digital Subscriber Line (DSL) ports installed in the second port of said modem. This is extremely well known in the art. Examiner takes official notice.

As to **claim 8**, *Timm* discloses the modem according to claim 1, wherein the upstream data rate of each Digital Subscriber Line (DSL) signal is equal to

the downstream data rate of said Digital Subscriber Line (DSL) signal. [column 6 lines 21-39, column 15 lines 17-31, "symmetrical"].

As to **claim 9**, *Timm* discloses the modem according to claim 1, wherein the high data rate of said single Ethernet signal is 100 Mbps [column 16 lines 3-4].

As to **claim 11**, *Timm* discloses the modem according to claim 1, wherein the telephone line is a twisted pair of copper wires [column 11 lines 45-49, column 16 lines 4-6, "pots"].

As to **claim 12**, *Timm* discloses the modem according to claim 1, wherein the first port is a 100BaseT port [column 16 lines 3-4].

As to **claim 13**, *Timm* discloses the modem according to claim 1, wherein the second port is a 100 BaseS port [column 16 lines 3-6].

As to **claim 14**, *Timm* discloses the modem according to claim 1, wherein each Digital Subscriber Line (DSL)-port measures a maximum data rate for transmission and reception of a Digital Subscriber Line (DSL) signal over the respective telephone line connected to said Digital Subscriber Line (DSL)-port [column 21 lines 13-25].

As to **claim 15**, *Timm* discloses the modem according to claim 1, wherein each Digital Subscriber Line (DSL)-port comprises a link establishment result register for storing the measured respective maximum data rate of said Digital Subscriber Line (DSL)-port [column 21 lines 13-51].

As to **claim 16**, *Timm* discloses the modem according to claim 14, wherein the maximum data rates of all installed active Digital Subscriber Line (DSL)-ports are indicated by said Digital Subscriber Line (DSL)-ports to the auto-sense unit via lines and are stored with the corresponding port numbers of the Digital Subscriber Line (DSL)-ports [column 20 lines 29-54, column 21 lines 13-25].

As to **claim 17**, *Timm* discloses a point to point facility transport system for the bi-directional transport of an Ethernet signal over N telephone lines connecting a central office facility to a customer premise [column 15 line 66 – column 16 line 8], comprising:

N downstream transmission paths [Fig. 3a, 140] for transporting a single Ethernet signal from the central office [Fig. 3a, 220] facility to the customer premise [Fig. 3a, 100], each downstream transmission path operative to transport a data stream having downstream data rates [column 32 lines 5-18];

N upstream transmission paths [Fig. 3a, 140] for transporting a single Ethernet signal from the customer premise [Fig. 3a, 100] to the central office facility [Fig. 3a, 220], each upstream transmission path operative to transport a data stream having configurable data rate [column 32 lines 5-18];

first modem means located at the central office [Fig. 3a, gain modem in 220] facility and coupled to one end of said N downstream transmission paths [Fig. 3a, 140] and to one end of said N upstream transmission paths [Fig. 6f];

second modem means [Fig. 3a, 100] located at the customer premises [Fig. 3a, 100] and coupled to the one end of said N downstream transmission paths [Fig. 3a, 140] and the other end of said N upstream transmission paths [Fig. 6f];

wherein said first modem means and said second modem means are operative to transmit to and receive from said N telephone lines data frames encapsulating said Ethernet signal [column 15 lines 66-column 16 line 8, fig. 2f]; and

wherein said first modem means and said second modem means further comprises: (a) a first port connected to a physical layer module configured to receive and transmit a single Ethernet signal having a high data rate [column 15 line 66-column 16 line 8]; (b) a data splitter configured to split the received Ethernet signal into a configurable number of downstream Digital Subscriber Line (DSL) signals [column 16 lines 9-11, Fig. 3b, column 17 lines 36-67]; (c) a second port comprising a configurable number of Digital Subscriber Line (DSL) ports coupled to said data splitter [column 16 lines 9-11, Fig. 3b, column 17 lines 36-67], wherein each Digital Subscriber Line (DSL) port is configured to transmit a separate downstream Digital Subscriber Line (DSL) signal having a configurable downstream data rate [column 16 lines 9-11, Fig. 3b, column 17 lines 36-67, column 32 lines 5-18], wherein each transmitted downstream Digital Subscriber Line (DSL) signal is transmitted via a corresponding telephone line connected to said Digital Subscriber Line (DSL) port, wherein each Digital

Subscriber Line (DSL) port is further configured to receive a upstream Digital Subscriber Line (DSL) signal having a configurable upstream data rate, wherein each received upstream Digital Subscriber Line (DSL) signal is received over said telephone line connected to said Digital Subscriber Line (DSL) port [column 16 lines 9-11, Fig. 3b, column 17 lines 36-67, column 32 lines 5-18]; and (d) a data collection and reorganization unit coupled to said Digital Subscriber Line (DSL) ports and configured to assemble said upstream Digital Subscriber Line (DSL) signals into said single Ethernet signal for transmission by said physical layer module [column 16 lines 9-11, Fig. 3b, column 17 lines 36-67]. Timm discloses the modem communication system with receiving and transmitting paths with a switch which multiplex either the training sequence or output data into the transmission path (Timm abstract). Timm also discloses management process for a Mid-band DSL (MDSL) lines which provides a simple, efficient and flexible interface to manage the line connection between MDSL-C (central office site) and MDSL-R (residential site) [column 7 lines 16-30, column 10 lines 1-13, column 15 lines 66 to column 16 lines 26]. DSL modems that manage connection with a group of machines are termed as DSL router. But they still have function of performing framing data, segmenting data and reassembling data. This is same as MDSL modem that sends and receives the data from MDSL ports and Ethernet ports. It is inherent to sequence, split and re-assemble the data frames.

As to **claim 18**, *Timm* discloses the facility transport system according to claim 17, wherein the transmission paths utilize quadrature amplitude modulation

to transport said Ethernet signal between said central office facility to said customer premise [column 5 lines 26-39, column 10 lines 14-20, column 16 lines 44-51, fig. 6f, column 17 lines 45-51].

As to **claim 19**, *Timm* discloses a facility transport system for bi-directional transport of an Ethernet signal over N telephone lines connecting a central office facility to a customer premise [column 15 line 66 – column 16 line 8], comprising:

N downstream transmission paths [Fig. 3a, 140] for transporting a single Ethernet signal from the central office [Fig. 3a, 220] facility to the customer premise [Fig. 3a, 100], each downstream transmission path operative to transport a data stream having downstream data rates [column 32 lines 5-18];

N upstream transmission paths [Fig. 3a, 140] for transporting a single Ethernet signal from the customer premise [Fig. 3a, 100] to the central office facility [Fig. 3a, 220], each upstream transmission path operative to transport a data stream having configurable data rate [column 32 lines 5-18];

switch means located at the central office facility and coupled to one end of said N downstream transmission paths [Fig. 3a, 140] and one end of said N upstream transmission paths [Fig. 3a, gain modem in 220, column 6 line 51-53];

a network element located [fig. 3a 100] at the customer premises [fig. 3a 100] and coupled to the other end of said N downstream transmission paths [Fig. 3a, 140] and to one end of said N upstream transmission paths [Fig. 6f];

wherein said switch means and said network element are operative to transmit to and to receive from said N telephone lines data frames encapsulating

said Ethernet signal [column 15 lines 66-column 16 line 8, fig. 2f], wherein N is a positive integer;

wherein each switch means and network element comprises at least one modem having: (a) a first port connected to a physical layer module configured to receive and transmit a single Ethernet signal having a high data rate [column 15 line 66-column 16 line 8]; (b) a data splitter configured to split the received Ethernet signal into a configurable number of downstream Digital Subscriber Line (DSL) signals [column 16 lines 9-11, Fig. 3b, column 17 lines 36-67]; (c) a second port comprising a configurable number of Digital Subscriber Line (DSL) ports coupled to said data splitter [column 16 lines 9-11, Fig. 3b, column 17 lines 36-67], wherein each Digital Subscriber Line (DSL) port is configured to transmit a separate downstream Digital Subscriber Line (DSL) signal having a configurable downstream data rate [column 16 lines 9-11, Fig. 3b, column 17 lines 36-67, column 32 lines 5-18], wherein each transmitted downstream Digital Subscriber Line (DSL) signal is transmitted via a corresponding telephone line connected to said Digital Subscriber Line (DSL) port, wherein each Digital Subscriber Line (DSL) port is further configured to receive a upstream Digital Subscriber Line (DSL) signal having a configurable upstream data rate, wherein each received upstream Digital Subscriber Line (DSL) signal is received over said telephone line connected to said Digital Subscriber Line (DSL) port [column 16 lines 9-11, Fig. 3b, column 17 lines 36-67, column 32 lines 5-18]; and (d) a data collection and reorganization unit coupled to said Digital Subscriber Line

(DSL) ports and configured to assemble said upstream Digital Subscriber Line (DSL) signals into said single Ethernet signal for transmission by said physical layer module [column 16 lines 9-11, Fig. 3b, column 17 lines 36-67]. Timm discloses the modem communication system with receiving and transmitting paths with a switch which multiplex either the training sequence or output data into the transmission path (Timm abstract). Timm also discloses management process for a Mid-band DSL (MDSL) lines which provides a simple, efficient and flexible interface to manage the line connection between MDSL-C (central office site) and MDSL-R (residential site) [column 7 lines 16-30, column 10 lines 1-13, column 15 lines 66 to column 16 lines 26]. DSL modems that manage connection with a group of machines are termed as DSL router. But they still have function of performing framing data, segmenting data and reassembling data. This is same as MDSL modem that sends and receives the data from MDSL ports and Ethernet ports. It is inherent to sequence, split and re-assemble the data frames.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. **Claims 6 and 7** are rejected under 35 U.S.C. 103(a) as being unpatentable over *Timm* as applied above in view of U.S. Patent No. 5,754,540 to *Liu et al.* ("*Liu*").

As to **claim 6**, *Timm* does not expressly disclose a MII interface.

In the same field of invention, Liu discloses the MII interface [Liu abstract].

At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify *Timm* to have the MII interface as taught by Liu. The suggestion/motivation would have been to provide flexible repeater architecture for use with the emerging 100Base-T standards [Liu column 2 lines 53-58].

As to **claim 7**, *Timm* discloses the modem according to claim 1, comprising a controller for the data collection and reorganization unit and the data splitter depending on the number of active Digital Subscriber Line (DSL) ports sensed by said configuration and auto sense unit [Abstract, column 9 lines 1-64, column 34 line 66-column 35 line 5].

Timm does not expressly disclose a controller for configuring MII interface.

In the same field of invention, Liu discloses the controller for configuring MII interface [Liu abstract].

At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify *Timm* to have the controller for configuring MII interface as taught by Liu. The suggestion/motivation would have been to provide flexible repeater architecture for use with the emerging 100Base-T standards [Liu column 2 lines 53-58].

10. **Claim 10** is rejected under 35 U.S.C. 103(a) as being unpatentable over *Timm*.

As to **claim 10**, *Timm* discloses the modem according to claim 1, wherein the maximum number of installed Digital Subscriber Line (DSL)-ports is four [Fig. 3b, column 16 lines 9-11]. *Timm* shows three DSL ports. It is extremely obvious to have fourth DSL port in order to accommodate more DSL modem. This is a design choice.

Response to Arguments

11. Applicant's arguments filed 3/10/2009 have been fully considered but they are not persuasive.

12. On page 9-10 of the applicant's remarks, the applicant argues following:

- "Timm et aL do not teach a modem comprising a data collection and reorganization unit that is configured to assembly upstream DSL signals into a single Ethernet signal for transmission, as recited in claims 1, 17 and 19...."

"More particularly, a router typically receives data from each node (340,342, 344), parses the data into packets, and reads packet header information to identify the destination address of the packet. Then the router "routes" that packet to its appropriate destination as a single signal over the LAN 320 in accordance with the destination address information. A subsequent packet is then sent as another, different signal in a time-multiplexed fashion. Therefore the DSL router 330 of Timm et al. does not combine signals received at its DSL ports from the devices 340,342 and 344, into a single Ethernet signal. Therefore Timm et al. do not teach a data collection reorganization unit as claimed, and thus fails to anticipate the claimed invention..."

13. The examiner respectfully disagrees with the applicant arguments for the following reasons: Timm discloses the modem communication system with receiving and transmitting paths with a switch which multiplex either the training sequence or output data into the transmission path (Timm abstract). Timm also discloses management process for a Mid-band DSL (MDSL) lines which provides a simple, efficient and flexible interface to manage the line connection between MDSL-C (central office site) and MDSL-R (residential site) [column 7 lines 16-30, column 10 lines 1-13, column 15 lines 66 to column 16 lines 26]. Fig. 3b shows "*MDSL modem*" acting as router. But it is still a MDSL modem. DSL modems that manage connection with a group of machines are termed as DSL router. But they still have function of performing framing data, segmenting data and reassembling data. Timm discloses MDSL modem that sends and receives the data from MDSL ports and Ethernet ports. It is inherent to sequence, split and re-assemble the data frames. Thus, Timm discloses a data collection reorganization unit as claimed in claims 1, 17 and 19. The prior art rejections has been amended to clarify above arguments.

14. On page 11 of the applicant's remarks, the applicant argues following:

- "Without conceding whether the claims 1,2 and 9 render claims 17-19 obvious, but for the details of the modem, Timm et al. do not teach a data collection and reorganization unit for the reasons set for in Section I above. Therefore claims 17-19 are non-obvious over the cited art. Accordingly, withdrawal of the rejection is respectfully requested…."

15. The examiner respectfully disagrees with the applicant arguments for the following reasons: Timm discloses a data collection reorganization unit as claimed in claims 1, 17 and 19 (see above arguments). Thus, claims 17-19 are still remained rejected under obviousness-type double patenting over U.S. Patent No. 6,088,368 in view of Timm. See prior art rejections for detail.

Conclusion

16. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- U.S. Patent No: 5,892,768 to Jeng
- U.S. Patent No: 6,353,619 to Banas et al.

- U.S. Patent No: 6,680,940 to Lewin et al.
- U.S. Patent No: 6,115,755 to Krishan

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANTIM SHAH whose telephone number is (571)270-5214. The examiner can normally be reached on Monday to Friday 7:30 am-5:00 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ahmad Matar can be reached on (571)272-7488. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/A. S. /
Examiner, Art Unit 2614

/Ahmad F Matar/
Supervisory Patent Examiner, Art Unit 2614